

WHAT IS CLAIMED IS:

1. A high-power microwave antenna system comprising:
a pulse-generating source for generating a pulse to be
radiated by the antenna toward a target; an antenna formed
by an electrically conductive inner surface of an antenna
airbag that is electrically connected to the pulse-
generating source; and a gas generator for filling the
antenna airbag with gas to inflate the airbag and render it
operational for radiating the pulse from the source.

2. An antenna system according to claim 1, wherein
the conductive inner surface of the antenna airbag
simulates a horn antenna.

3. An antenna according to claim 2, wherein at
least part of the lateral inner surface of the antenna
airbag is conductive and an end surface opposite the
surface is non-conductive.

4. An antenna system according to claim 3, further
comprising an additional parachute type airbag connected to
said antenna airbag and provided with a conductive inner

surface over at least part of its inner surface to form a reflector antenna with said horn antenna serving as a feed for the reflector.

5. An antenna according to claim 1, wherein the conductive inner surface of the antenna airbag forms a reflector of a reflector antenna for a pulse generated by the source.

6. An antenna according to claim 3, wherein at least a portion of the inner surface of the airbag adjacent to source is conductive and form a horn antenna, and a further portion of the inner surface of the airbag axially displaced from the horn antenna is electrically conductive and forms a reflector for a pulse radiated by the horn antenna, whereby a reflector antenna is formed within the airbag.

7. An antenna system according to claim 6, wherein the further portion includes a lateral surface of the airbag.

8. An antenna system according to claim 6, wherein the further surface is a curved surface disposed opposite the horn antenna aperture.

9. An antenna according to claim 1, wherein an electronegative gas is used as the filling gas for the antenna airbag.

10. An antenna system according to claims 1, wherein the antenna airbag has a shape of one of a truncated cone and truncated pyramid once it is filled with the filling gas.

11. An antenna system according to claim 1, wherein a high power microwave (HPM) source is used as the pulse-generating source.

12. An antenna system according to claim 1, wherein the antenna is a broadband antenna.

13. An antenna system according to claim 1, wherein the antenna airbag that forms the antenna is mounted in the non-inflated state inside an aerodynamic casing on a

